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Financing of the administrative and budgetary aspects of the financing of the United Nations peacekeeping operations: financing of the United Nations peacekeeping operations

Progress in the implementation of the field assets control system: a module of the field mission logistics system

Report of the Secretary-General

Summary

The present report is submitted pursuant to the requests of the Advisory Committee on Administrative and Budgetary Questions for the Secretary-General to submit to the General Assembly a comprehensive report on the use of the field assets control system and the extent to which it has benefited procurement and the management of peacekeeping assets (A/54/801, para. 21) as well as a progress report on the implementation of the initial stage of the field assets control system (A/54/841, para. 38). The present report describes the initial stages of implementation of the field assets control system, taking into account the views of the Advisory Committee contained in its reports A/54/801 and A/54/841. It expands on the status of the field mission logistics system, which was described in the report of the Secretary-General to the General Assembly of 31 July 1997 (A/51/957, paras. 25 and 26).

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I. Introduction

1. The field assets control system (FACS) of the Department of Peacekeeping Operations was developed as an in-house project by the Communications and Electronics Services Section to fulfil the requirement for the management of non-expendable United Nations-owned equipment in the field. The report of the Secretary-General to the General Assembly dated 31 July 1997 (A/51/957), described the system and set forward the Secretariat's intention to develop and implement an integrated, online field mission logistics system.

2. FACS is a mission-critical online inventory tracking and management system currently deployed at all major peacekeeping missions and at other missions administered by the Department of Peacekeeping Operations (28 missions to date) providing near real-time access to integrated, consolidated mission inventory data at the Logistics and Communications Service in New York.

3. The system has been delivered as per the envisaged timeline and was fully implemented in the planned peacekeeping missions in the first quarter of 2000.

4. The following objectives, as contained in document A/51/957, have been accomplished:

(a) A control mechanism in accounting for the inventory of the global United Nations-owned non-expendable equipment has been established;

(b) Global visibility of United Nations-owned inventory for total life cycle management in a consolidated database has been provided;

(c) The Organization's existing global mission communications, data storage and transmission infrastructure has been employed;

(d) Modern commercial groupware (software) and bar-coding technology for the seamless integration and transfer of asset data between field missions and the Field Administration and Logistics Division of the Department of Peacekeeping Operations has been used;

(e) Near real-time multi-level user access has been provided;

(f) Information on mission preparedness and improvements in the mission start-up and closure process has been provided;

(g) Property accountability has been assigned to the mission-level asset managers;

(h) Specialist logistics units i.e. Engineering, Transport, Communications, Electronic Data Processing, Supply and Medical Units, within the Logistics and Communications Service of the Field Administration and Logistics Division in New York have been empowered to act as commodity managers responsible for the global management of United Nations assets that fall within their areas;

(i) Self-accounting units at each mission have been provided with means to account for and track property accountability details;

(j) Standardization of inventory data capture, strict coding standards and uniform inventory records have been established;

(k) Detailed inventory of peacekeeping assets, covering both non-expendable equipment and special attractive items, including status, condition and location have been provided;

(l) Commodity managers have been provided with life cycle costs and item residual value data;

(m) Improvements in comprehensiveness and accuracy of data in the databases have been carried out.

5. The total inventory value maintained in the consolidated global assets database has grown to over half a billion dollars in respect of over 185,000 inventory records.

6. As stated in document A/51/957, it is the Secretariat's intention to develop and progressively deploy logistics support systems, additional to FACS, to create an integrated, online field mission logistics system to provide better accountability for contingent-owned equipment, United Nations-owned equipment and supplies and improve logistics responsiveness by automating administrative procedures.

II. Stages of implementation of the field assets control system

7. The stages of the implementation of FACS comprised the following phases:

(a) Requirements specification;

(b) Systems design and prototyping;

(c) Systems development, documentation, testing and proving;

(d) Systems phased deployment at all missions, including user and technical training;

(e) Systems maintenance set-up and technical and help desk support;

(f) Change management set-up;

(g) Formulation of policy and procedures for asset management;

(h) Specification and generation of decision support reports.

A. Requirements specification

8. The specification of requirements defined the business processes to be supported by the system and the technological platform selected for development and deployment, which comprised use of the Organization's existing global mission communications, data storage, applications development and transmission infrastructure (see annex I to the present report: the asset management process: business process flow diagram).

9. The system automates the life cycle of the asset management process, from delivery of locally-procured assets, or transfers from missions, the United Nations Logistics Base at Brindisi, Italy (UNLB), or Headquarters in New York, through receiving and inspection, storage, redistribution and replenishment to write-off and/or recall for shipments to other missions or to the Field Administration and Logistics Division reserve at UNLB.

10. The "mission assets", a consolidated global assets database, is recorded on the servers at the Field Administration and Logistics Division, allowing for online visibility of mission inventories by the commodity managers within the Logistics and Communications Service. Subsets of each database (mission assets, section assets, spare parts, disposal), containing records on the inventories of individual missions, are maintained at each mission, which ensures that mission users can input and extract data on a 24-hour basis. Back-up replicas are maintained at UNLB ensuring recovery in the event of any corruption or disaster.

B. Systems design and prototyping

11. The system was designed in a modular manner to facilitate both development as well as post implementation maintenance and support. It consists of a number of interlinked modules as follows:

(a) Item master catalogue;

(b) Mission assets;

(c) Shipments-in;

(d) Receiving and inspection;

(e) In-mission tracking;

(f) Section operations;

(g) Maintenance;

(h) Spare parts;

(i) Shipments-out;

(j) Write-off and disposal.

12. The business process diagram for the section operations is contained in annex II to the present report and a roadmap of the field assets management process is contained in annex III.

13. The application software allows for the automation of the following functions:

(a) Electronically transfers documents in respect of assets transferred out of missions to the destination mission or to the Field Administration and Logistics Division reserve;

(b) Enables the recording of the receiving and inspection of the items in liaison with the pertinent self-accounting unit;

(c) Supports an item master consisting of a catalogue of all non-expendable and special attractive items, each with a unique identification number with support of temporary item numbers;

(d) Enables functions to track the storage, issuance and receipt of items;

(e) Enables functions to track the maintenance and repair of vehicles and generators, including the expenditure incurred on spare parts and labour;

(f) Recalls items required for shipments out to unit stock;

(g) Tracks the reserve assets maintained in the Field Administration and Logistics Division reserve and start-up kit assets maintained at UNLB;

(h) Enables the creation of material request orders by Field Administration and Logistics Division at New York with visibility to section officers at UNLB;

(i) Enables the recording of accidents, damaged items requiring repair or beyond repair and initiation of damage and discrepancy reports for cases of vehicles involved in accidents;

(j) Creates shipping documents for processing by Movements Control;

(k) Enables the initiation and approval of the write-off of mission inventory by each self-accounting unit and generates the provisional condemnation certificate;

(l) Enables the submission of the approved write-off documents to Claims Unit for processing and approval/rejection by the mission's Chief Administrative Officer, the Local Property Survey Board or the Headquarters Property Survey Board in New York;

(m) Archives documents in respect of approved write-offs;

(n) Generates a series of views to support operational decision-making and consolidated asset tracking by commodity managers at the Field Administration and Logistics Division.

14. There are five operational databases within FACS and two problem-reporting databases on the production servers of each mission, which are replicated to the mission hub servers and through the Brindisi hub servers to the Department of Peacekeeping Operations hub and production servers. A Notes database downloaded from the Integrated Management Information System (IMIS) extracts database (in support of the Headquarters requisitioning and purchase ordering process) and a set of eight databases under the configuration management of the field mission logistics system are replicated from the Department of Peacekeeping Operations hub server through the Brindisi hub servers to each mission. This translates into 140 mission critical operational databases, 56 problem-reporting databases, 28 requisitioning databases (downloaded from IMIS extracts and replicated to missions) and 224 databases under configuration management on a system-wide basis. Each database requires server based administration at mission level, Brindisi level and at Headquarters (single and consolidated level), a complex replication topology, complex scheduling, backstopping and disaster recovery at Brindisi and consolidation and monitoring at the Department of Peacekeeping Operations, including data integrity checks and/or non-occurrence of scheduled events.

C. Systems development, documentation, testing and proving

15. FACS was successfully prototyped and developed using the commercially available groupware platform Lotus Notes within the Field Administration and Logistics Division. Annexes IV, V and VI to the present report give the macro business process diagrams for the different modules of the system.

16. The system enables functional segregation through multiple layers of security controls. These exist at the database, document, form and field levels. Further control is exercised through the allocation of users to defined user groups such that each user of the system may be assigned access rights only within one user group.

17. A knowledge base for FACS and the field mission logistics system has been created comprising a comprehensive set of documents for both systems. Documents include systems overviews, functional specifications, user manuals, rules and regulations pertaining to the systems, data and business process flow diagrams, implementation reports, post implementation reviews, timelines, audit comments and minutes of meetings.

18. Each module of FACS and each new release of software is tested within a defined test regime comprising unit testing, group testing (both at the Field Administration and Logistics Division and at UNLB), integrated testing at systems level, beta testing and acceptance testing at pilot sites.

D. Systems phased deployment at all missions, including user and technical training

19. FACS has been fully implemented in 28 field missions (annex VII to the present report gives the deployment schedule).

20. The deployment at each field mission included Notes training, FACS training for all sections (general overview, reporting, management), operational training by section (Property Control and Inventory Unit, Receiving and Inspection, Electronic Data Processing, Communications, Engineering, Claims, Transport, Supply) and technical training for staff of the Electronic Data Processing Unit, including a designated FACS administrator at each mission. The training and deployment was carried out by a site team, and included installation of Notes (where needed), installation and customization of FACS, assistance with data preparation (physical inspection of all available assets, bar-coding, receiving and inspection, codification of assets) and the setting-up of a help desk after implementation for in-house maintenance and user support capability. Additionally, teams inspected and upgraded local area network (LAN) and wide area network (WAN) interfaces when necessary.

21. Over 800 staff members in the missions have been provided training at point of installation. Training material is maintained online for in-mission on-the-job training of new staff. There are currently over 500 daily users of the system with each mission having one designated FACS administrator (systems administration) and one designated FACS focal point (application support).

E. Systems maintenance set-up and technical and help desk support

22. The Field Mission Logistics Unit was set up and resources allocated from the support account from mid-1999, consequent to the description contained in the report of the Secretary-General to the General Assembly (A/51/957, paras. 25 and 26). The Logistics Unit intends to carry out the Secretariat's intention to develop and progressively deploy additional logistics support systems to create an integrated, online field mission logistics system, providing global visibility for United Nations-owned and contingent-owned equipment as well as United Nations-owned expendable supplies and ensuring the growth, quality and security of the systems in line with the expanding needs of administrative and logistic activities in the field.

23. The original scope of work as envisaged in 1997 has seen significant increase with the emergence of a number of new and large missions (the United Nations Transitional Administration in East Timor (UNTAET), the United Nations Interim Administration Mission in Kosovo (UNMIK), the United Nations Organization Mission in the Democratic Republic of the Congo (MONUC) and the United Nations Mission in Ethiopia and Eritrea (UNMEE)). This has created an additional degree of complexity to the task domain and increased the load on the available support and maintenance facilities and allocated resources within the Field Mission Logistics Unit. Despite this increase, it is notable that FACS was implemented at all missions within the allotted timeline of two years.

F. Change management set-up

24. All enhancements to FACS requested by the user community, both in the Field Administration and Logistics Division and within the missions, and all suspected bugs are reported to the system development team through the discussion databases, by telephone and by email. All changes are managed using the standard software development life cycle model. Detailed guidelines have been defined with respect to how to manage software change, whether covering bugs or enhancements, including the rollover from the accepted test templates to the production version.

25. As the system was implemented in a phased manner, a number of different versions have been deployed at missions. There was a need to rationalize this scenario, which has resulted in Release 3.0, a new integrated release of FACS, containing additional, core functionalities pertaining to the warehousing and tracking of spare parts and supplies for all self-accounting units (Electronic Data Processing, Communications, Supply, Engineering, Transport at each mission). The deployment of Release 3.0 was completed in December 2000.

26. Release 3.0 provided one single platform to manage non-expendable items and expendable property, including spare parts and supplies, and

standardized all processes of asset and expendable management within all missions. It fixed reported errors to end-July 2000, provided a number of requested enhancements to the system's functionalities and greatly enhanced security features as well as extra reports (views).

27. A "FACS 2000" conference and seminar were held at UNLB from 10 to 17 June 2000 and was attended by system administrators and focal points (around 40) from all missions as well as a senior auditor from the Office of Internal Oversight Services and senior staff of the Office of Programme Planning, Budget and Accounts. During this programme, several videoconferences were held for all trainees, trainers and the FACS team at the Field Administration and Logistics Division to discuss and resolve issues and problems on a dynamic basis.

G. Reports for decision support

28. A new module is currently under development to address the growing need for management reports and decision support information. Data warehousing technology was selected, following evaluation of the available methodologies, with the objective of creating a centralized information repository providing access to integrated, corporate data for strategic management and decision support. Report templates are published through a reporting web portal so that users may either utilize the fixed format reports, drill through to detailed transactions to perform analyses or customize and publish their own reporting formats. This system empowers management to make effective, timely, accurate logistics support decisions while significantly lowering the load on the FACS servers.

III. The extent to which the field assets control system has benefited procurement and management of peacekeeping assets

29. FACS was introduced to the field with a view to overcoming the difficulties associated with non-expendable property management, including the non-standard and uncoordinated implementation of asset control systems in each of the field missions, which had resulted in data collection that was neither interactive nor transparent on a global basis, lack of standards in item codification, inadequate inventory recording procedures and ineffective tracking and maintenance history of assets.

30. The introduction of FACS has achieved the following results, which have contributed to improvement of the efficiency of peacekeeping inventory management:

(a) Standardized work flow procedures, previously inconsistent from mission to mission, and standard inventory management procedures (A/54/841, para. 38) were set up with respect to such areas as, inter alia, bar-coding, standardization of item codes for different types of non-expendable equipment, proper receipt, issuance, hand-over and recording and standardized condition codes to record the condition of assets;

(b) Many areas, in particular with respect to the roles and responsibilities of pertinent organizational units (Receiving and Inspection, self-accounting units at field missions, Property Control and Inspection Units and Claims), which required policy directives and special procedures to be formulated by the Commodity Manager within the Logistics and Communications Service, were explicitly defined and circulated to all missions;

(c) Many data issues including, data integrity, coherency, consistency, security and data that is considered mandatory, were explicitly defined and missions were informed; areas requiring extra security (financial data such as purchase value), were accommodated through enhancements to the software.

31. FACS provides each mission with full visibility of their inventory enabling an informed procurement planning process contingent upon each self-accounting unit ensuring that inventory records are accurately and expeditiously updated.

32. The choice of the Lotus Notes as the groupware platform, enabling automatic system-wide replication of changed information, has ensured that FACS provides the Field Administration and Logistics Division with worldwide visibility of their peacekeeping assets. This has allowed, inter alia, the identification of inventory at the Field Administration and Logistics Division reserve for transfer to other missions, in particular new missions, thereby reducing the requirement for new procurements as well as

increasing the responsiveness and readiness of the Division.

33. The visibility of the start-up kits maintained at UNLB by the Field Administration and Logistics Division has improved its readiness and rapid deployment capability.

34. Lessons learned from past liquidations reveal that the major delay experienced in liquidations was due largely to the creation and verification of the mission's inventory. FACS has eliminated this time-consuming requirement and has imposed maintenance and verification of inventory as ongoing activity, thereby facilitating the readiness of a mission liquidation phase.

35. The automation of the preliminary asset disposal plan has also led to the improvement in mission liquidations by enabling the entire planning process, including final disposition approvals, to be executed online between the missions and the commodity managers at the Field Administration and Logistics Division. This has served to reduce mission liquidations from months to weeks as experienced in recent liquidations.

36. FACS provides a detailed transaction history of transferred inventory from a liquidated mission to a current mission, thereby enabling online monitoring and follow-up of asset shipments. Since all the related asset documents are electronically transferred to the receiving mission, the process of re-entering the inventory data, as was previously required, has been eliminated, improving efficiency and avoiding duplication of effort.

37. In 2000, FACS was used for the first time as the mission-wide, sole repository for the non-expendable inventory data of all field missions. Before the advent of the system, such data was often maintained in separate, non-integrated, non-communicating database systems, irregularly updated, with reports often produced in a discrete, inconsistent manner. Each new implementation of FACS at a mission enforces progressive standardization through extensive checking and accurate recording of the location and status of inventory items. For the first time, the Logistics and Communications Service has been able to access comprehensive inventory data, with the cumulative errors of the past years being progressively reconciled and resolved. As records are reconciled and the system matures, with users maturing as they use the system, FACS will reveal the true growth and usage trends for inventory at each mission, by management and by fund category, thereby providing inventory tracking and reconciliation as well as accurate information for supporting logistical decision-making processes.

38. Consequent to the implementation of FACS at all missions, and the attainment of an integrated inventory control and management platform, the Logistics and Communications Service self-accounting unit focal points, as well as FACS development and maintenance staff within the Field Mission Logistics Unit, were able to obtain a substantive amount of feedback on the required performance measures and corresponding areas of weakness of the system within each field mission. The following statistics underline the growth in accuracy of inventory data:

(a) The number of inventory records containing a blank or less than $3 as purchase value was 856 as at end-April 2000; this has been reduced to 0;

(b) The number of inventory records with a blank date of original entry to mission (EOD) was 32,428 as at end-April 2000; this has been reduced to 6,246;

(c) The number of inventory records with a blank bar code number was 15,919 as at end-April 2000; this has been reduced to 9,481;

(d) The number of inventory records with a blank management category (owned by category) was 1,104 as at end-April 2000; this has been reduced to 357;

(e) The number of temporary item codes awaiting codification was 6,657 as at end-April 2000; this has been reduced to 629;

(f) The number of inventory records for which the asset group or category that they belonged to had not been identified was 574 as at end-April 2000; these have been reduced to 196.

39. The information available from FACS has already assisted contingents serving at specific missions, such as the United Nations Interim Force in Lebanon (UNIFIL), to identify, analyse and make adjustments to essential financial parameters such as the costs of maintenance. Given the transparency of the system, and the consolidation of mission-specific and consolidated inventory management data, a variety of operational support information may be obtained on

numerous parameters, including inventory numbers, frequencies and patterns of issuance, time taken to repair equipment, time taken to obtain spare parts when a vehicle is under service and liberty mileage use, in essence, used to identify and pinpoint bottlenecks and problem areas and to provide feedback for mission preparedness and procurement planning.

40. An extensive review of property control issues, FACS usage and changes in procedural workflow have revealed a number of areas where improvements can be effected to make the use of information flow from FACS more effective and efficient.

IV. Current status of the field mission logistics system

41. FACS was designed and deployed as one element of an overall effort to improve the responsiveness, efficiency and cost-effectiveness of the provision of United Nations logistics support to missions through the field mission logistics system.

42. The field mission logistics system constitutes the following interlinked sub-systems:

(a) Field assets control system;

(b) Movements control;

(c) Maintenance tracking;

(d) Field expendable and supplies;

(e) Contingent-owned equipment/memorandum of understanding;

(f) Logistics services;

(g) Logistics reference;

(h) Data warehouse and reporting web portal.

43. The functionalities of the remaining modules of the field mission logistics system are given below.

44. **Movements control**. This automates the processing of the movement (deploy, rotate and redeploy) of military observers and civilian police, and of cargo, (deploy, redeploy and transfer) and United Nations-owned equipment between the UNLB and missions and between missions employing multi-modal transport. It manages sea-lift contracts and short- and long-term air charters, maintaining passenger manifests, and disseminates aviation flight safety policy, information and procedures. This system will also facilitate in-mission joint movement control centre planning, scheduling, manifesting, tracking and report-archiving for cargo and personnel movements within field mission areas, including online preparation, submission and processing of cargo and personnel movement requests.

45. **Maintenance tracking system**. This was implemented simultaneously with the field assets control system to cover spare parts issuance against United Nations-owned equipment (vehicles and generators), as well as contingent-owned equipment, in particular equipment provided under dry lease arrangements.

46. **Contingent-owned equipment/memorandum of understanding**. This is being implemented in two phases. Phase I automates the processing of contingent-owned equipment of troop-contributing countries participating in peacekeeping missions, from the build-up of the memorandum of understanding through implementation and verification by the field and subsequent evaluation by the Logistics Control Section. Interlinked modules provide access to contribution agreements, wet/dry lease and self-sustainment arrangements and a database of contingent assets. Contingent-owned equipment Phase I has been implemented at UNTAET. Phase II provides for the online reporting, processing and implementation of the prescribed policies and procedures concerning the reimbursement (as of April 2000 this functionality has yet to be specified and developed) and control of the contingent-owned equipment.

47. **Field expendable and supplies system**. This system is an automated online system providing access to information for the management and accountability of all United Nations-owned expendable property, including general supplies, fuel, spare parts, industrial gases and lubricants, rations, ammunitions and water. The system will maintain mission supplies from point of approved receiving and inspection through storage to issuance and contract administration. It will provide support for warehouse operations, automatic replenishment, consumption and cost data for analysis by commodity managers. Future releases of this system will also provide for military elements, units and contingents to provide personnel strength and item consumption reports to improve the forecasting of requirements and accountability for expendable supplies. This system aims at improving overall

management and decision-making on issues related to procurement, delivery, usage levels, redistribution, replenishment, warehousing storage, write-off and disposal of mission expendable inventories at the time of mission liquidation. These measures are expected, inter alia, to significantly reduce reported excessive stocks of consumable supplies in mission inventories.

48. **Logistics services system**. This system facilitates online preparation, submission and dissemination of logistics reports and other logistic operational information; the issuance, preparation and tracking of all contracts committees and letters of assists actions by field missions and the Field Administration and Logistics Division, from requisition to finalization; the processing of claims and servicing of Boards of Inquiry; and the coordination and preparation of audit report responses. It will allow for the raising of documents inside the sub-system to maintain a complete audit trail and to provide near real-time status visibility for relevant divisions and mission staff.

49. **Logistics reference system**. This system serves as an electronic reference library providing online access to the Department of Peacekeeping Operations logistics reference and technical documents and provides for the electronic dissemination of new and revised policies, procedures and guidelines. This sub-system has already been developed and implemented.

50. **Data warehousing and reporting web portal system**. This module is being developed on an Online Analytical Processing (OLAP) SQL server to enable a variety of hard copy reports to be produced. The requisite data in the field mission logistics system databases is downloaded into a data warehouse from the hub-servers containing the production data. It is intended to create a corporate data warehouse comprising consolidated asset and expendable data for the United Nations and for contingents and to deliver the data, utilizing pre-defined business rules, to all logistics specialist units within the Field Administration and Logistics Division through a reporting web portal to enable the generation of online, Internet-based data analyses and customized management information reports.

51. It is intended to further enhance the field mission logistics system through interactive web-based design technology to provide access through the Internet and to provide, through the corporate data warehouse, an on-demand back-end analytical and statistical reporting tool for management to support planning and decision-making.

V. Future development

A. Management of expendable property

52. The requirement for the creation and deployment of an expendable supplies system was set out in the report of the Secretary-General to the General Assembly of 31 July 1997 (A/51/957, para. 26 (d)).

53. That report stipulated that maintenance tracking would be the first component of the field mission logistics system, providing condition tracking and the necessary controls for the management of expendable spare parts (A/51/957, para. 6). As a result, a maintenance-tracking module for tracking engineering and vehicle spare parts was designed and developed within FACS.

54. The maintenance tracking module within FACS formed the basis of a preliminary prototype for an expendables and supplies warehousing system. the field expendable and supplies system is being designed and developed in-house (as per A/51/957, para. 26 (d)) to control United Nations-owned expendable property (both durable expendables and consumables). The scope of the system is described in paragraph 47 above. Release 1.0 of the field expendable and supplies system is intended to cover spare parts, durable expendables and consumables.

55. Release 1.0 of the field expendable and supplies system is scheduled for phased deployment commencing in February 2001.

56. The system, which will be closely integrated with FACS, will incorporate the following core functionalities:

(a) Maintain databases containing records of all United Nations-owned expendables managed by each self-accounting unit;

(b) Maintain a multi-warehousing environment within the mission and the sectors;

(c) Establish and support document and process sharing with FACS;

(d) Maintain records and controls for the efficient management of a sub-set of expendable

property, including durable expendables, consumables and spare parts.

57. The introduction of the system will substantially increase the number of inventory records and daily transactions being managed and administered through the field mission logistics system.

B. Ongoing deployment at new peacekeeping and other missions

58. FACS will continue to be deployed at all new peacekeeping missions.

59. FACS has also been implemented at a number of missions of the Department of Political Affairs. It is expected that the remainder of these missions will be implemented by the end of the first quarter of 2001.

60. There are a further nearly 5,000 inventory records (additional to the 184,000 FACS records) pertaining to contingent-owned equipment in the contingent-owned equipment/memorandum of understanding database at UNTAET, which will substantively grow when the system is implemented in other relevant missions and in new missions.

61. As new systems are developed and deployed, the number of databases requiring management and control is expected to significantly grow, thereby increasing the complexity of managing the entire operation, as well as the load on the data and communications infrastructure. The introduction of knowledge management tools and techniques within the system will be necessary in order to enable its proper management and control.

C. Interfaces with other field-based software applications

62. Other major, field-based software systems include the field personnel management system, Reality, PROGEN and Sun Accounts.

63. The feasibility of building interfaces between FACS and other major systems in the field such as Reality and Sun Accounts has been considered. Reality is a very old proprietary application software system, running on an obsolete operating system platform, BTRIEVE. As of 31 December 2000, all support for BTRIEVE and Sun System for BTRIEVE has been withdrawn. Given these factors, building interfaces would be an expensive exercise and a backward technological step. However, subject to budgetary and resource restrictions, the Department of Peacekeeping Operations is considering undertaking a feasibility study to determine the best approach to integrating financial systems in the field with FACS for the purpose of cost accounting for peacekeeping inventories. This would include investigating alternative off-the-shelf, non-proprietary procurement software: this is contingent on directions taken by IMIS, which is currently closely integrated with Reality, although only for Headquarters implementations.

D. Management reports

64. FACS is not an online transaction processing system. It is an online system for creating and managing documents pertaining to non-expendable property records. By the nature of the system's design, information being input in the field missions is replicated every 15 minutes to Headquarters, making FACS a dynamically changing system. Therefore, there is a requirement to freeze the system and to place the data dumps into an off-line environment in order to produce the required fixed format reports for the purpose of accountability and reconciliation. The Field Administration and Logistics Division has conducted discussions with the Office of Programme Planning, Budget and Accounts to analyse and define requirements for a set of formal reports to be consistently produced by the system, along with the allied procedures and time frame, for purposes of audit, budget and financial reporting. These formal reports comprise a month-end report and two bi-annual reports to end-June and end-December. The procedures to be put in place will include the definition and transmission of formal templates to each mission, identification of freeze-points for obtaining relevant data and procedures for validating the data and certifying the reports prior to submission to Headquarters.

65. It is intended to provide commodity managers with the desktop tools and capabilities to define and produce their own ad hoc reports. It is emphasized, however, that, in contrast to the formal reports produced by the missions, the management information provided by ad hoc reports will not be subject to

verification and certification by the mission. The data warehouse comprises data automatically gathered from the asset database of each field mission replicated in Headquarters on a daily basis. The quality of data within FACS, as maintained by each field mission, is the responsibility of the chief administrative officer/department of administration of each mission, who have the responsibility to respond to the observations and findings concerning property records by the Board of Audit. This has been a subject of concern to the Board of Audit. The Field Administration and Logistics Division has promulgated numerous directives and guidelines with regard to the efficient use of the FACS system and the maintenance of property management rules, guidelines and procedures.

VI. Resource considerations

66. The requirement for a long-term decentralized maintenance strategy with centralized planning, coordination and control needs to be taken into account. Having taken into consideration aspects with regards to factors such as the information technology marketplace, the quantity and quality of available information technology expertise and the considerable difficulties the Department of Peacekeeping Operations has in obtaining and retaining such valuable human resources, it is planned to outsource specific maintenance and support activities of the field mission logistics system, while retaining specialist activities, with overall plan and coordination of the whole project within the Field Mission Logistics Unit/Communications and Electronic Services Section. The performance of FACS and latterly the field expendable and supplies system, is entirely dependent on the backbone network and on ensuring that the network is stable and has sufficient capacity to carry the increased data traffic and remain reliable. There is also an increasing need to provide for enhanced security measures at operational and database levels as well as during transmission, and to maintain well developed contingency plans in the event of failure or disaster.

67. The resources within the Field Mission Logistics Unit for the development and deployment of FACS and the field mission logistics are as follows:

(a) One chief of field mission logistics systems (P-4);

(b) Three computer information systems officers (P-3);

(c) Two information systems assistants.

68. These resources are being utilized for the following tasks:

(a) To formulate and ensure the implementation of the field mission logistics system master plan so that development and deployment is executed in a timely manner in accordance with implementation schedules;

(b) To formulate user requirements, design, develop and test the field expendables and supplies system and the contingent-owned equipment system;

(c) To evaluate requirements in respect of the movements system and the logistics services system;

(d) To support and maintain the several implemented modules of the field mission logistics system, FACS, maintenance tracking and contingent-owned equipment (Release 1 at UNTAET) systems;

(e) To restructure and maintain the logistics reference system;

(f) To perform global wide area network administration in respect of all field mission logistics system databases, ensuring ongoing replication and resolving conflicts as required;

(g) To perform global data administration monitoring and review of all field mission logistics system databases;

(h) To analyse and monitor the administration and usage of the field mission logistics system in the field and set up reliable procedures to ensure effectiveness of operations, integrity of the databases and adherence with guidelines for current practices and policy;

(i) To prepare guidelines for the field related to the management of asset control activities;

(j) To maintain close dialogue and liaison with field mission staff involved in implementation, operation and use of the field mission logistics system, and to ensure the quality of field support, including an escalating problem reporting and resolution mechanism;

(k) To review and clear correspondence on asset control issues, providing guidance to field missions and Headquarters staff on these matters;

(l) To formulate and ensure the implementation of software maintenance mechanisms to include version management, field updates, disaster recovery, user review and error reporting and audit trails;

(m) To formulate and ensure the implementation of an enhanced reporting capability that addresses management needs for fixed periodic reports and ad hoc reports both at sectional and mission levels;

(n) To assess and specify bridges and interfaces for the future integration of the field mission logistics system with other field and Headquarters-based logistics support software modules;

(o) To regularly review and assess the information processing capabilities and capacities of each mission, including infrastructure needs and provide recommendations that support the effective and efficient performance of field mission logistics system;

(p) To evaluate information-sharing needs for Headquarters and field missions;

(q) To evaluate the logistics support requirements for the Logistics and Communications Service and formulate and advise on the development and deployment of new applications to address and best support such needs.

69. The additional requirements related to the tasks elaborated below, were included among the posts requested in connection with the implementation of the report of the Panel on United Nations Peace Operations (A/55/507/Add.1), the consideration of which has been deferred pending completion of the comprehensive review of peacekeeping operations.

(a) **Applications software projects**. There is a need to plan, define and undertake major projects in respect of providing application software solutions that support the Department of Peacekeeping Operations and peacekeeping operations, as well as enhancing and integrating the existing logistics support systems (including FACS, the field expendable and supplies system, Movements Control, contingent-owned equipment, etc.) and administrative, financial and personnel management systems (field personnel management system, PROGEN, Reality, etc.) in the field within a phased, prioritized plan of implementation. One P-4 post, one P-3 post, one General Service (Principal level) post and one General Service (Other level) post were requested for these functions.

(b) **Consolidated reporting**. Requirements specifications with the development of a corporate data warehouse made up of subject-specific data cubes and the design, implementation and distribution of reporting templates through a web portal to enable consolidated reporting on mission critical applications. One P-3 post was requested for these functions.

70. The deployment of the field expendable and supplies system and other systems will result in the need for a far more comprehensive and complex maintenance and support structure than is possible given the resourcing within the Field Mission Logistics Unit and the Communications and Electronic Services Section. The maintenance and support structure will need to be on an escalating basis of problem resolution and it is envisaged that support structures will need to be deployed at UNLB as well as within the Field Administration and Logistics Division. The growth of available information, as is the trend with all information systems, will also lead to an increasing need for more sophisticated reporting and decision support information capability and availability.

71. The following ongoing maintenance and support tasks are proposed for outsourcing:

(a) End-user support: set-up of a 24/7 devolved help desk structure; setting up and managing procedures for an escalating problem resolution methodology; managing the problems reported in the databases;

(b) Application software maintenance and change management support with a 24/7 maintenance;

(c) Reports for decision support: recommendations on datamarts; design and testing of specified subject-specific data cubes; administering the servers;

(d) Standards/tools development and administration: design and development of utilities to enhance and upgrade the efficiency and effectiveness of systems usage and troubleshooting/diagnostics mechanisms;

(e) Training: make recommendations on training needs; follow-up on skills acquisition by users;

(f) Improvements: analysis and, where necessary, recommending methodologies for applications performance improvements, database

structures, server connectivity and replication topologies, clustering and fall-back features;

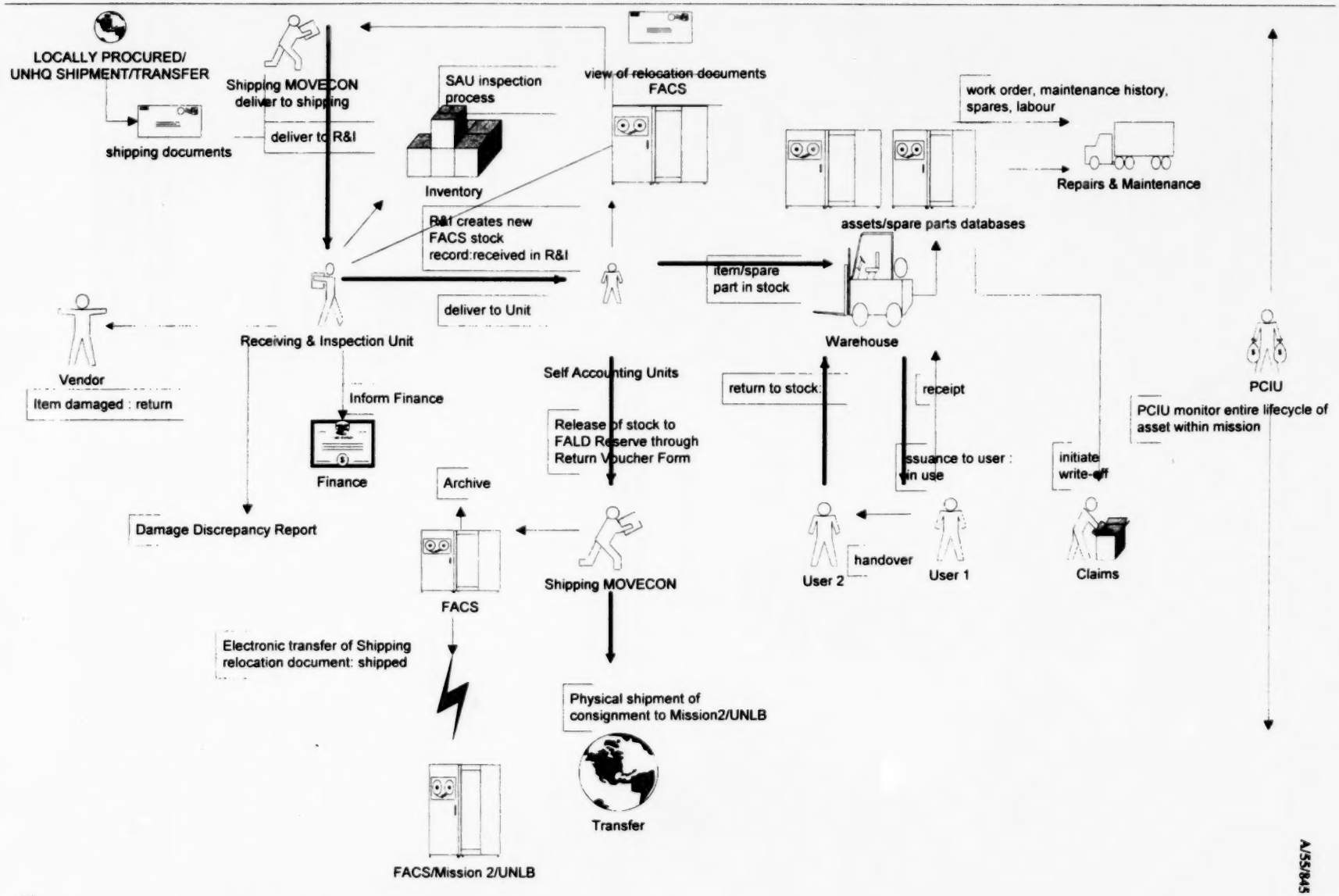
(g) Performance measures: advising on the administration of the mission critical Notes-based applications software, ensuring systems continuity and meeting of performance measures;

(h) Administer approved procedures for back-up, disaster recovery and contingency measures and advise on their enhancement and improvement;

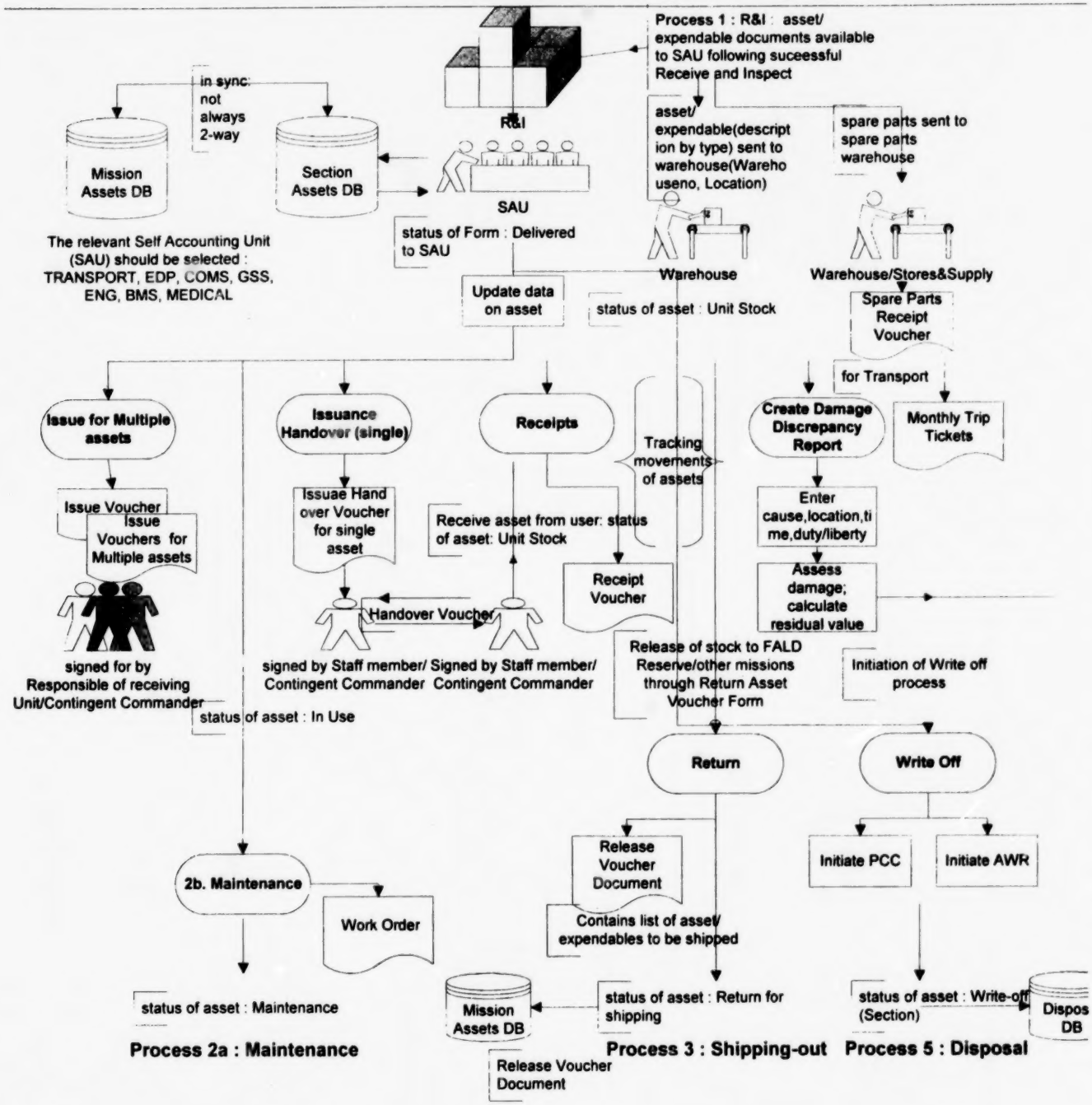
(i) Monitoring and measuring stipulated performance measures designed to critically assess the level of performance at each mission.

Annex I

The asset management process: business process flow diagram



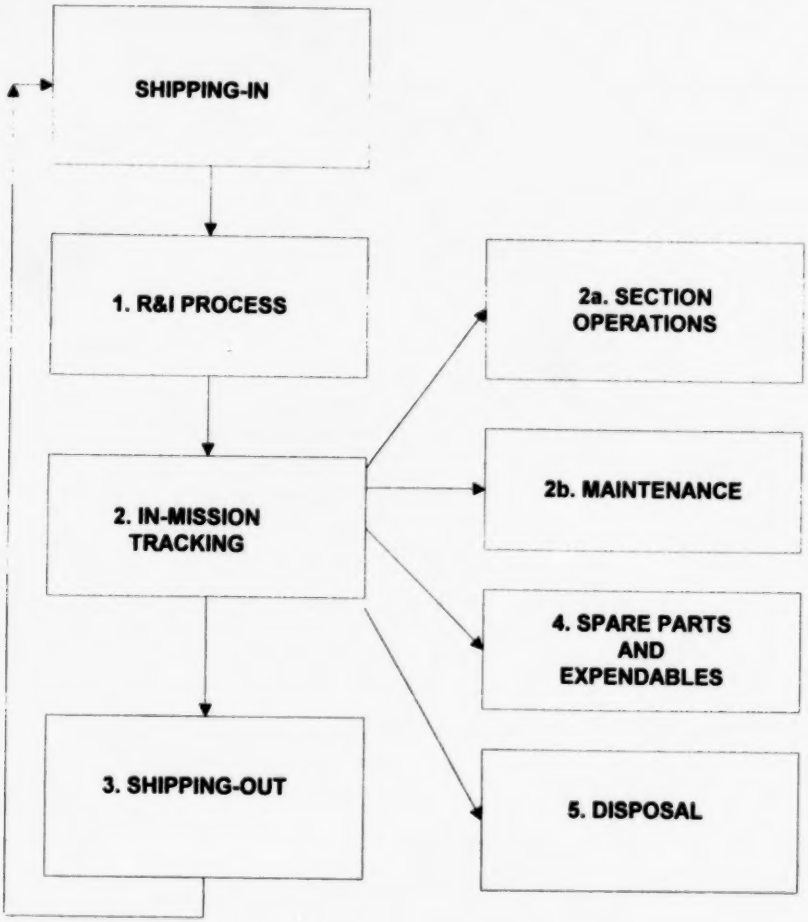
Annex II
In-mission tracking: section operations: business process diagram


Process 1 : R&I : asset/ expendable documents available to SAU following suceessful Receive and Inspect
R&I
in sync: not always 2-way
Mission Assets DB
Section Assets DB
SAU
asset/ expendable(descript ion by type) sent to warehouse(Wareho useno, Location)
spare parts sent to spare parts warehouse
The relevant Self Accounting Unit (SAU) should be selected : TRANSPORT, EDP, COMS, GSS, ENG, BMS, MEDICAL
status of Form : Delivered to SAU
Warehouse
Warehouse/Stores&Supply
Update data on asset
status of asset : Unit Stock
Spare Parts Receipt Voucher
for Transport
Issue for Multiple assets
Issuance Handover (single)
Receipts
Tracking movements of assets
Create Damage Discrepancy Report
Monthly Trip Tickets
Issue Voucher
Issue Vouchers for Multiple assets
Issuae Hand over Voucher for single asset
Receive asset from user: status of asset: Unit Stock
Enter cause,location,ti me,duty/liberty
Receipt Voucher
Assess damage; calculate residual value
Handover Voucher
signed for by Responsible of receiving Unit/Contingent Commander
signed by Staff member/ Contingent Commander
Signed by Staff member/ Contingent Commander
Release of stock to FALD Reserve/other missions through Return Asset Voucher Form
Initiation of Write off process
status of asset : In Use
Return
Write Off
Release Voucher Document
Initiate PCC
Initiate AWR
2b. Maintenance
Work Order
Contains list of asset/ expendables to be shipped
status of asset : Maintenance
Mission Assets DB
status of asset : Return for shipping
status of asset : Write-off (Section)
Dispos DB
Release Voucher Document
Process 2a : Maintenance
Process 3 : Shipping-out
Process 5 : Disposal

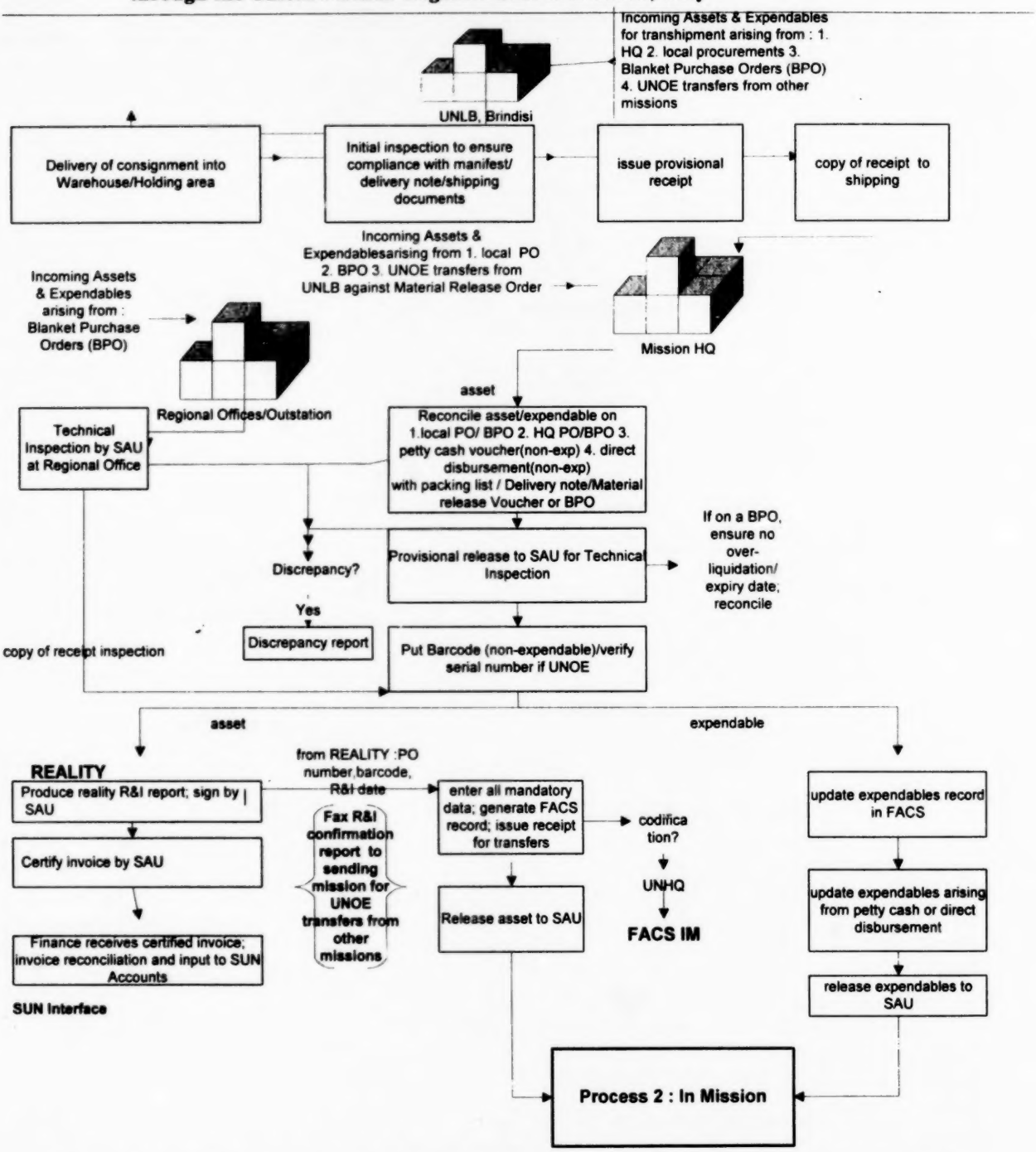
The Section Operations, which are the day-to-day operations, take place in the In-Mission Tracking Module and are performed on the Section Assets DB. Each Self-Accounting Unit (SAU) owns and is responsible for their own SA database. There are seven SA databases, one for each SAU (BMS, COM, EDP, ENG, GSS, MED and TPT). Section operations comprise : i. Track assets location ii. Issue assets to users iii. Receive assets from users iv. Handover assets from user to user v. Create workorder and add spare parts cost and worktime cost to the workorder vi. Initiate write-off actions vii. Prepare items to be shipped. When items are brought in for repairs, the status of the asset becomes "In Maintenance" and processing passes over to the Maintenance Module.

Annex III

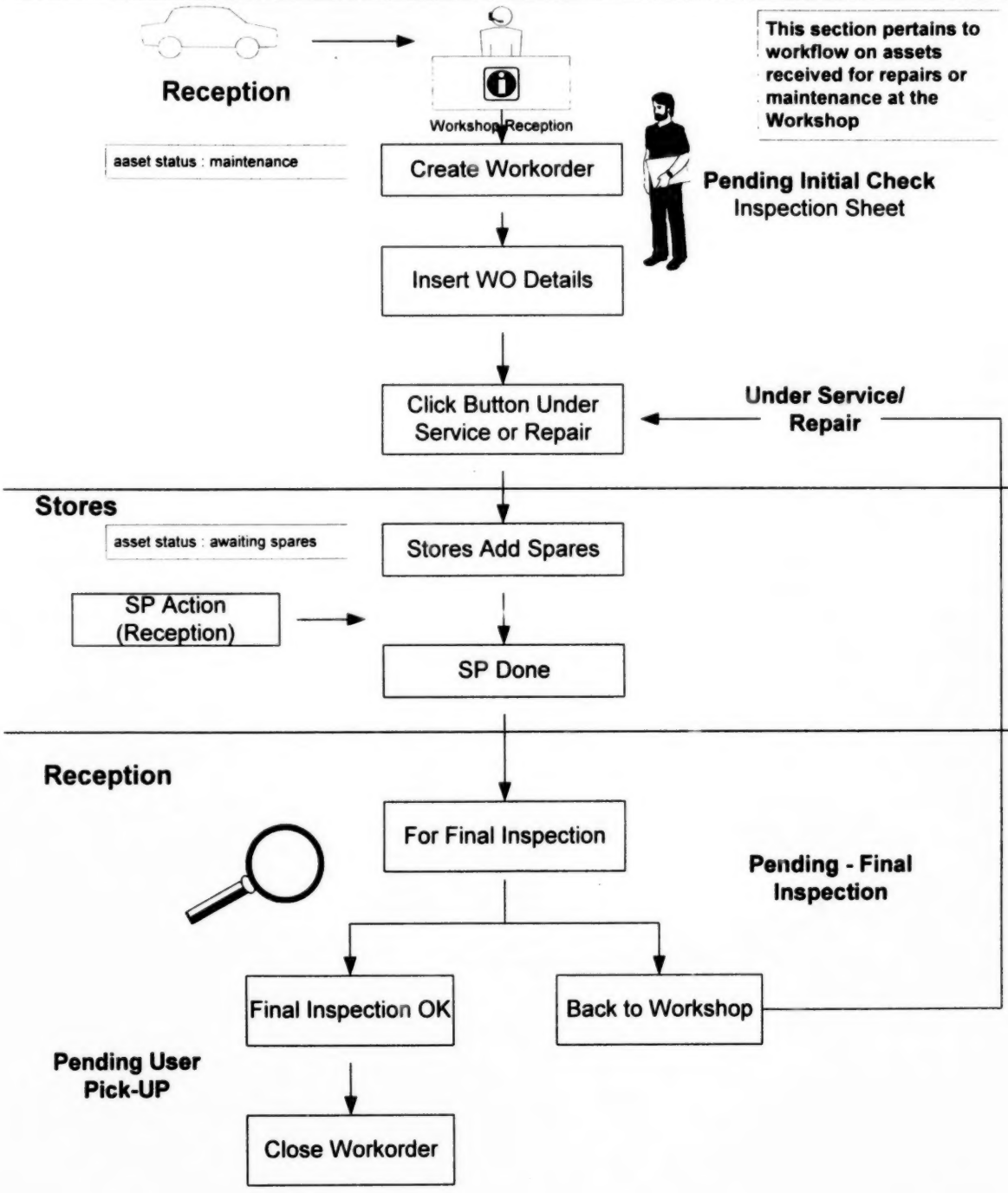
Block overview of the field asset management process roadmap



Annex IV The receiving and inspection process at field missions/trans-shipment through the United Nations Logistics Base at Brindisi, Italy

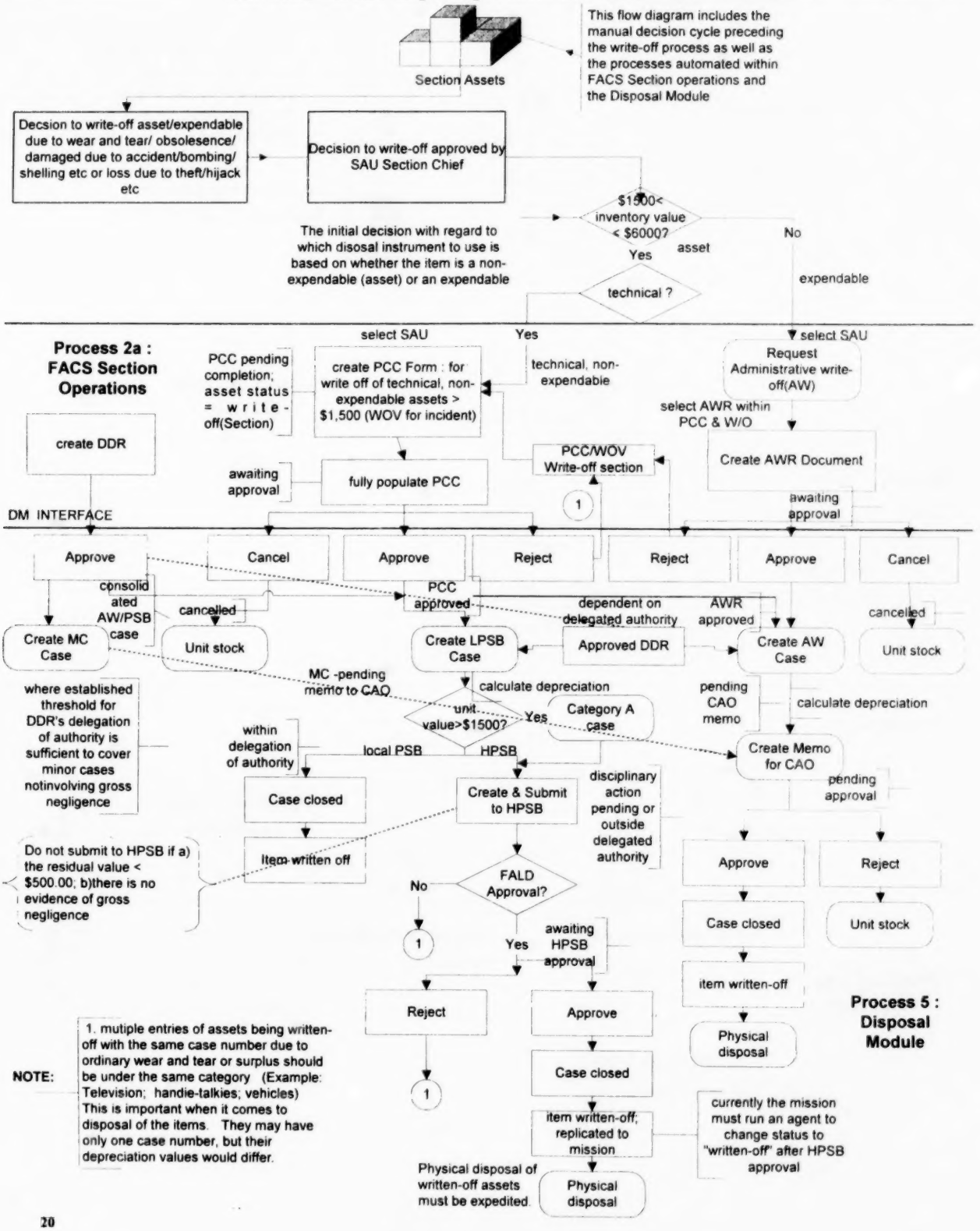

Incoming Assets & Expendables for transhipment arising from : 1. HQ 2. local procurements 3. Blanket Purchase Orders (BPO) 4. UNOE transfers from other missions
UNLB, Brindisi
Delivery of consignment into Warehouse/Holding area
Initial inspection to ensure compliance with manifest/ delivery note/shipping documents
issue provisional receipt
copy of receipt to shipping
Incoming Assets & Expendablesarising from 1. local PO 2. BPO 3. UNOE transfers from UNLB against Material Release Order
Incoming Assets & Expendables arising from : Blanket Purchase Orders (BPO)
Mission HQ
Regional Offices/Outstation
asset
Technical Inspection by SAU at Regional Office
Reconcile asset/expendable on 1.local PO/ BPO 2. HQ PO/BPO 3. petty cash voucher(non-exp) 4. direct disbursement(non-exp) with packing list / Delivery note/Material release Voucher or BPO
If on a BPO, ensure no over-liquidation/ expiry date; reconcile
Discrepancy?
Provisional release to SAU for Technical Inspection
Yes
Discrepancy report
copy of receipt inspection
Put Barcode (non-expendable)/verify serial number if UNOE
asset
expendable
REALITY
Produce reality R&I report; sign by SAU
from REALITY :PO number,barcode, R&I date
enter all mandatory data; generate FACS record; issue receipt for transfers
codification?
UNHQ
FACS IM
update expendables record in FACS
Certify invoice by SAU
Fax R&I confirmation report to sending mission for UNOE transfers from other missions
Release asset to SAU
update expendables arising from petty cash or direct disbursement
Finance receives certified invoice; invoice reconciliation and input to SUN Accounts
release expendables to SAU
SUN Interface
Process 2 : In Mission

1. It is essential that all non-expendables and expendables classified as special, whether received at Regional offices/outstation or at the mission HQ, and whether purchased against a PO / BPO/ petty cash voucher / or by direct disbursement must be processed through the REALITY procurement system. Expendables purchased against an UNHQ BPO must also be processed through the REALITY R&I process.
2. This is necessary in order that financial controls are properly maintained (eg. BPOs are not overliqidated or processed past their expiry date).
3. The R&I Office should ensure that all non-expendables are properly barcoded or, if received from a mission transfer, have their barcodes verified. This should be done in close liaison with the Self Accounting Unit representative once ownership is established.
4. The REALITY PO number and other mandatory details should be entered into the FACS asset form such that a full reconciliation is maintained. Mandatory data includes, inter alia, serial number, eod dates, asset type, life expectancy and purchase value.


Reception
Workshop Reception
This section pertains to workflow on assets received for repairs or maintenance at the Workshop
aaset status : maintenance
Create Workorder
Pending Initial Check
Inspection Sheet
Insert WO Details
Click Button Under Service or Repair
Under Service/ Repair
Stores
asset status : awaiting spares
Stores Add Spares
SP Action (Reception)
SP Done
Reception
For Final Inspection
Pending - Final Inspection
Final Inspection OK
Back to Workshop
Pending User Pick-UP
Close Workorder

Annex VI

The write-off and disposal process: block schematic


Section Assets
This flow diagram includes the manual decision cycle preceding the write-off process as well as the processes automated within FACS Section operations and the Disposal Module
Decsion to write-off asset/expendable due to wear and tear/ obsolesence/ damaged due to accident/bombing/ shelling etc or loss due to theft/hijack etc
Decision to write-off approved by SAU Section Chief
$1500< inventory value < $6000?
Yes
No
asset
expendable
technical ?
The initial decision with regard to which disosal instrument to use is based on whether the item is a non-expendable (asset) or an expendable
Process 2a : FACS Section Operations
select SAU
Yes
select SAU
PCC pending completion; asset status = write-off(Section)
create PCC Form : for write off of technical, non-expendable assets > $1,500 (WOV for incident)
technical, non-expendable
Request Administrative write-off(AW)
select AWR within PCC & W/O
create DDR
awaiting approval
fully populate PCC
PCC/WOV Write-off section
Create AWR Document
awaiting approval
1
DM INTERFACE
Approve
Cancel
Approve
Reject
Reject
Approve
Cancel
consolidated AW/PSB case
cancelled
PCC approved
dependent on delegated authority
AWR approved
cancelled
Create MC Case
Unit stock
Create LPSB Case
Approved DDR
Create AW Case
Unit stock
where established threshold for DDR's delegation of authority is sufficient to cover minor cases notinvolving gross negligence
MC -pending memo to CAO
calculate depreciation
unit value>$1500?
Yes
Category A case
pending CAO memo
calculate depreciation
within delegation of authority
local PSB
HPSB
Create Memo for CAO
Case closed
Create & Submit to HPSB
disciplinary action pending or outside delegated authority
pending approval
Do not submit to HPSB if a) the residual value < $500.00; b)there is no evidence of gross negligence
Item written off
Approve
Reject
No
FALD Approval?
Case closed
Unit stock
1
Yes
awaiting HPSB approval
item written-off
Process 5 : Disposal Module
Reject
Approve
Physical disposal
Case closed
item written-off; replicated to mission
currently the mission must run an agent to change status to "written-off" after HPSB approval
Physical disposal of written-off assets must be expedited
Physical disposal
NOTE:
1. mutiple entries of assets being written-off with the same case number due to ordinary wear and tear or surplus should be under the same category (Example: Television; handie-talkies; vehicles) This is important when it comes to disposal of the items. They may have only one case number, but their depreciation values would differ.

Annex VII

Schedule of deployment of the field assets control system at peacekeeping missions

Name of Mission	*Date of implementation*	*Status*
1. UNOMIG	July-August 1997	Fully operational
2. UNFICYP	August-September 1997	Fully operational
3. UNLB	October-November 1997	Fully operational
4. UNTSO	December 1997	Fully operational
5. FALD reserve	September 1998	Fully operational
6. UNIFIL	October 1998	Fully operational
7. UNDOF	November 1998	Fully operational
8. UNIKOM	December 1998	Fully operational
9. MINUGUA	February 1999	Fully operational
10. UNMIBH	March 1999	Fully operational
11. MINURSO	March 1999	Fully operational
12. MINURCA	April 1999	Fully operational
13. UNMOGIP	April 1999	Fully operational
14. UNSCO	April 1999	Fully operational
15. MIPONUH	June-July 1999	Fully operational
16. MICIVIH	June-July 1999	Fully operational
17. UNMOT	July 1999	Fully operational
18. UNMIK	July-September 1999	Fully operational
19. UNOCHI	November 1999	Fully operational
20. IRCU	November 1999	Fully operational
21. UNTAET	November 1999	Fully operational
22. UNAMSIL	February 2000	Fully operational
23. UNOA	March 2000	Fully operational
24. MONUC	March 2000	Fully operational
25. UNMEE	October 2000	Fully operational
26. BONUCA	November 2000	Fully operational
27. UNPOS	November 2000	Fully operational
28. UNGCI	November 2000	Fully operational
29. UNOL	December 2000	Work in progress
30. UNSMA	December 2000	Work in progress
31. UNPOB	December 2000	Work in progress
32. UNOB	December 2000	Work in progress
33. GLR	2001	Fully operational
34. UNOGBIS	December 2000	Work in progress